

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An absorbent article comprising:

a top sheet, a back sheet and a core disposed between the top sheet and back sheet, said core comprised of pulp, a polymer or a combination thereof;
wherein the core has a maximum Distribution Index (DI_{max}) of at least about 6,000 g/m³.

Claim 2 (original): The absorbent article of claim 1, wherein the DI_{max} is at least about 6,500 g/m³.

Claim 3 (original): The absorbent article of claim 1, wherein the DI_{max} is at least about 7,000 g/m³.

Claim 4 (original): The absorbent article of claim 1, wherein the DI_{max} is at least about 7,500 g/m³.

Claim 5 (original): The absorbent article of claim 1, wherein the core is comprised of about 10% to about 90% by weight of particulate or fibrous SAP.

Claim 6 (original): The absorbent article of claim 1, wherein the core is comprised of about 20% to about 80% by weight of particulate or fibrous SAP.

Claim 7 (original): The absorbent article of claim 1, wherein the core is comprised of about 40% to about 70% by weight of particulate or fibrous SAP.

Claim 8 (original): The absorbent article of claim 1, wherein the core has a minimum Distribution Index (DI_{min}) of about 2,800 g/m.sup.3 to about 3,600 g/m.sup.3.

Claim 9 (original): The absorbent article of claim 1, wherein the core has a minimum Distribution Index (DI_{min}) of about 2,900 g/m³ to about 3,300 g/m³.

Claim 10 (original): The absorbent article of claim 1, wherein the core has a minimum Distribution Index (DI_{min}) of about 2,950 g/m³ to about 3,200 g/m³.

Claim 11 (original): The absorbent article of claim 1, wherein the core has a Distribution Index i,j (DI_{i,j}) at -5,0 of at least about 5,750 g/m³.

Claim 12 (original): The absorbent article of claim 1, wherein the core has a Distribution Index i,j (DI_{i,j}) at 0,0 of at least about 6,000 g/m³.

Claim 13 (original): The absorbent article of claim 1, wherein the core has a Distribution Index i,j (DI_{i,j}) at 5,0 of at least about 5,750 g/m³.

Claim 14 (original): The absorbent article of claim 1, wherein the core has a Distribution Index i,j (DI_{i,j}) at 10,0 of at least about 4,250 g/m³.

Claim 15 (original): The absorbent article of claim 1, wherein the core has a Distribution Index i,j (DI_{i,j}) at 15,0 of at least about 3,250 g/m³.

Claim 16 (original): The absorbent article of claim 1, wherein the core has a Distribution Index i,j (DI_{i,j}) of at least 5,500 g/m³ at each point along a centerline of the core from -5,0 to 5,0.

Claim 17 (original): The absorbent article of claim 1, wherein the DI_{max} corresponds to a section of the core between 0,0 and 5,0.

Claim 18 (currently amended): An absorbent article comprising:

a top sheet, a back sheet and a core disposed between the top sheet and back sheet, said
core comprised of pulp, a polymer or a combination thereof;

wherein the core has a Distribution Index i,j (DI i,j) at -5,0 of at least about 5,750 g/m³ or a Distribution Index i,j (DI i,j) at 10,0 of at least about 4,250 g/m³.

Claim 19 (original): The absorbent article of claim 18, wherein the core is comprised of about 10% to about 90% by weight of particulate or fibrous SAP.

Claim 20 (original): The absorbent article of claim 18, wherein the core is comprised of about 20% to about 80% by weight of particulate or fibrous SAP.

Claim 21 (original): The absorbent article of claim 18, wherein the polymer is SAP and is substantially homogeneous throughout the core.

Claim 22 (original): The absorbent article of claim 18, wherein the core is comprised of about 40% to about 70% by weight of particulate or fibrous SAP.

Claim 23 (currently amended): An absorbent article comprising:

a top sheet, a back sheet and a core disposed between the top sheet and back sheet, said core comprised of pulp, a polymer or a combination thereof;

wherein the core has a Distribution Index i,j (DI i,j) at -5,0 of at least about 5,750 g/m³; wherein the core has a Distribution Index i,j (DI i,j) at 0,0 of at least about 6,000 g/m³; wherein the core has a Distribution Index i,j (DI i,j) at 5,0 of at least about 5750 g/m³; wherein the core has a Distribution Index i,j (DI i,j) at 10,0 of at least about 4,250 g/m³; and wherein the core has a Distribution Index (DI) at $i,j = 15,0$ of at least about 3,250 g/m³.

Claim 24 (currently amended): An absorbent article comprising:

a top sheet, a back sheet and a core disposed between the top sheet and back sheet, said core comprised of pulp, a polymer or a combination thereof; said core having a first Distribution Index (DI_{male}) measured at a male insult point and a second Distribution Index (DI_{female}) measured at a female insult point;

wherein the difference between the DI_{male} and the DI_{female} is at most about 1,000 g/m³.

Claim 25 (original): The absorbent article of claim 24, wherein the difference between the DI_{male} and the DI_{female} is at most about 900 g/m³.

Claim 26 (original): The absorbent article of claim 24, wherein the difference between the DI_{male} and the DI_{female} is at most about 600 g/m³.

Claim 27 (original): The absorbent article of claim 24, wherein the difference between the DI_{male} and the DI_{female} is at most about 400 g/m³.

Claim 28 (original): The absorbent article of claim 24, wherein the DI_{male} and the DI_{female} are substantially the same.

Claim 29 (original): The absorbent article of claim 24, wherein the DI_{male} is at least about 4,200 g/m³.

Claim 30 (original): The absorbent article of claim 24, wherein the DI_{female} is at least about 5,500 g/m³.

Claim 31 (original): The absorbent article of claim 24, wherein DI_{max} of the article corresponds to a point on the centerline about equidistant between the male insult point and the female insult point.

Claim 32 (original): The absorbent article of claim 24, wherein the core is comprised of about 10% to about 90% by weight of particulate or fibrous SAP.

Claim 33 (original): The absorbent article of claim 24, wherein the core is comprised of about 20% to about 80% by weight of particulate or fibrous SAP.

Claim 34 (original): The absorbent article of claim 24, wherein the polymer is SAP and is

substantially homogeneous throughout the core.

Claim 35 (original): The absorbent article of claim 24, wherein the core is comprised of about 40% to about 70% by weight of particulate or fibrous SAP.

Claim 36 (currently amended): An absorbent article comprising: a top sheet, a back sheet and a core disposed between the top sheet and back sheet, said core comprised of pulp, a polymer or a combination thereof; said core being said core being designed to provide a predetermined characteristic using general formula I:

$$DI_{(i,j)}\left(\frac{g}{m^2}\right) = \frac{100\left(\frac{cm}{m}\right)}{N} \sum_{T=1}^N \frac{BW_T}{(Dist_T + 7.62)} \quad (I)$$

wherein N is the total number of core cells of the core, each core cell of the core corresponding to each of a plurality of 0.75 inch squares on a predetermined grid;

wherein T is each positive integer from 1 to N, each positive integer corresponding to each core cell of the core in numerical order;

wherein DIST_T is a distance in centimeters (cm) between the center of the core cell corresponding to T and point i,j;

wherein BW_T is the basis weight of each core cell, each core cell corresponding to each value for T; and

wherein i,j is a coordinate representing a point on the core.

Claim 37 (original): The absorbent article of claim 36, wherein the core has a DI of at least about 6,000 g/m³.

Claim 38 (original): The absorbent article of claim 36, wherein the core has a DI of at least about 6,500 g/m³.

Claim 39 (original): The absorbent article of claim 36, wherein the core has a DI of at least about 7,000 g/m³.

Claim 40 (original): The absorbent article of claim 36, wherein the predetermined characteristic is optimal absorbency, optimal cost efficiency, optimal compatibility for males and females, optimal comfort, optimal appearance or combinations thereof.

Claims 41-68 (canceled)

Claim 69 (currently amended): An absorbent article comprising:

a top sheet, a back sheet and a core disposed between the top sheet and back sheet, said
core comprised of pulp, a polymer or a combination thereof;

wherein the core has a Distribution Index i,j (DI i,j) that is substantially the same at a first insult point and a second insult point, the first insult point being the insult point at commencement of use of the absorbent article and the second insult point being the insult point after use of the absorbent article.

Claim 70 (original): The absorbent article of claim 69, wherein the core has a Distribution Index Profile tailored in accordance with the expected shift in position of the insult point over time resulting from sagging of an absorbent article during use.

Claim 71 (original): The absorbent article of claim 69, wherein the Distribution Index i,j (DI i,j) is substantially the same at every point on the core along a line between the first insult point and the second insult point.

Claim 72 (original): The absorbent article of claim 69, wherein the absorbent article is a nighttime diaper.

Claim 73 (original): The absorbent article of claim 69, wherein the absorbent article is a travel diaper.

Claim 74 (original): The absorbent article of claim 69, wherein the absorbent article is an extended-use diaper.

Claim 75 (canceled)

Claim 76 (canceled)